

CLAIM AMENDMENTS

Please cancel claims 12-15 and 19-20 without prejudice to filing one or more divisional applications containing the same. Please cancel claims 7 and 11 and amend claims 1, 16 and 17 as follows:

1. (Currently amended) A medical device comprising a core material which is a silicone-containing hydrogel material and an antimicrobial LbL coating that is not covalently attached to the core material, wherein the antimicrobial LbL coating includes:
 - (a) a polyelectrolyte LbL coating and an peptide layer of one or more antimicrobial peptides, wherein the polyelectrolyte LbL coating is composed of
 - (i) at least one layer of a first polyionic material, or
 - (ii) at least one layer of the first polyionic material and at least one layer of a second polyionic material having charges opposite of the charges of the first polyionic material,wherein said first and second polyionic materials, independently of each other, have functional groups which provide reactive sites, and wherein the peptide layer of one or more antimicrobial peptides are covalently attached to the LbL coating through the reactive sites; or
 - (b) at least one bilayer consisting of one cationic layer of a mixture including a positively-charged polyionic material and one or more antimicrobial peptides and one anionic layer of a negatively charged polyionic material,wherein the antimicrobial LbL coating imparts to the core material an increased surface hydrophilicity.
2. (Original) A medical device of claim 1, wherein said one or more antimicrobial peptides are selected from the group consisting of Cecropin A melittin hybrid, indolicidin, lactoferricin, Defensin 1, Bactenecin (bovin), Magainin 2, mutacin 1140, functionally equivalent or superior analogs thereof, and mixtures thereof.
3. (Original) A medical device of claim 1, wherein said one or more antimicrobial peptides are selected from the group consisting of Cecropin A melittin hybrid and indolicidin.
4. (Original) A medical device of claim 2, wherein the medical device comprises a polyelectrolyte LbL coating and an peptide layer of one or more antimicrobial peptide, wherein the polyelectrolyte LbL coating is composed of (i) at least one layer of a first polyionic material or (ii) at least one layer of the first polyionic material and at least one layer of a second polyionic material having charges opposite of the charges of the first polyionic

material, wherein said first and second polyionic materials, independently of each other, have functional groups which provide reactive sites, and wherein the peptide layer of one or more antimicrobial peptides are covalently attached to the LbL coating through the reactive sites.

5. (Original) A medical device of claim 4, wherein one of the first and second polyionic materials is a polyanionic material and the other is a polycationic material, wherein the polyanionic material is selected from the group consisting of polyacrylic acid, polymethacrylic acid, poly(thiophen-3-acetic acid), poly(4-styrenesulfonic acid), PAMAM dendrimers, PAAm-co-PAA, PVP-co-PAA, hyaluronic acid, glycosaminoglycans, fucoidan, poly-aspartic acid, poly-glutamic acid, carboxymethyl cellulose, carboxymethyl dextrans, alginates, pectins, gellan, carboxyalkyl chitins, carboxymethyl chitosans, sulfated polysaccharides, derivatives thereof and mixtures thereof, wherein the polycationic material is selected from the group consisting of poly(allylamine hydrochloride), poly(ethyleneimine), poly(vinylbenzyltrimethylamine), polyaniline, polypyrrole, poly(pyridinium acetylene), polyquat, polyaminoamide, poly- ϵ -lysine, albumin or collagen, aminoalkylated polysaccharides, derivatives thereof and mixtures thereof.
6. (Original) A medical device of claim 5, wherein the medical device is a contact lens.
7. (Canceled)
8. (Original) A medical device of claim 2, wherein the medical device comprises at least one bilayer consisting of one cationic layer of a mixture including a positively-charged polyionic material and one or more antimicrobial peptides and one anionic layer of a negatively charged polyionic material.
9. (Original) A medical device of claim 8, wherein the negatively-charged polyionic material is selected from the group consisting of polyacrylic acid, polymethacrylic acid, poly(thiophen-3-acetic acid), poly(4-styrenesulfonic acid), PAMAM dendrimers, PAAm-co-PAA, PVP-co-PAA, hyaluronic acid, glycosaminoglycans, fucoidan, poly-aspartic acid, poly-glutamic acid, carboxymethyl cellulose, carboxymethyl dextrans, alginates, pectins, gellan, carboxyalkyl chitins, carboxymethyl chitosans, sulfated polysaccharides, derivatives thereof and mixtures thereof, wherein the positively-charged polyionic material is selected from the group consisting of poly(allylamine hydrochloride), poly(ethyleneimine), poly(vinylbenzyltrimethylamine), polyaniline, polypyrrole, poly(pyridinium acetylene), polyquat, polyaminoamide, poly- ϵ -lysine, albumin or collagen, aminoalkylated polysaccharides, derivatives thereof and mixtures thereof.
10. (Original) A medical device of claim 9, wherein the medical device is a contact lens.

11-15. (Cancelled)

16. (Currently amended) A medical device comprising a layer of one or more antimicrobial peptides covalently attached to the medical device, wherein each of said one or more antimicrobial peptides ~~are selected from the group consisting of Cecropin A-melittin hybrid, Indolicidin, lactoferricin, Defensin 1, Bactenecin (bovine), Magainin 2, mutacin 1140, functionally equivalent or superior analogs thereof, and mixtures thereof~~ has an amino acid sequence selected from the group consisting of Lys-Trp-Lys-Leu-Phe-Lys-Lys-Ile-Gly-Ala-Val-Leu-Lys-Val-Leu-COOH, Lys-Trp-Lys-Leu-Phe-Lys-Lys-Ile-Gly-Ala-Val-Leu-Lys-Val-Leu-NH₂, Lys-Trp-Lys-Leu-Phe-Lys-Lys-Ile-Glu-Lys-Val-Gly-Gln-Asn-Ile-Arg-Asp-Gly-Ile-Ile-Lys-Ala-Gly-Pro-Ala-Val-Ala-Val-Val-Gly-Gln-Ala-Thr-Gln-Ile-Ala-Lys-NH₂, Lys-Trp-Lys-Leu-Phe-Lys-Lys-Ile-Glu-Lys-Val-Gly-Gln-Asn-Ile-Arg-Asp-Gly-Ile-Ile-Lys-Ala-Gly-Pro-Ala-Val-Ala-Val-Val-Gly-Gln-Ala-Thr-Gln-Ile-Ala-Lys-COOH, Ser-Trp-Leu-Ser-Lys-Thr-Ala-Lys-Lys-Leu-Glu-Asn-Ser-Ala-Lys-Lys-Arg-Ile-Ser-Glu-Gly-Ile-Ala-Ile-Ala-Ile-Gln-Gly-Gly-Pro-Arg, Arg-Arg-Trp-Gln-Trp-Arg-Met-Lys-Lys-Leu-Gly, Arg-Leu-Cys-Arg-Ile-Val-Val-Ile-Arg-Val-Cys-Arg, Ala-Cys-Tyr-Cys-Arg-Ile-Pro-Ala-Cys-Ile-Ala-Gly-Glu-Arg, Arg-Tyr-Gly-Thr-Cys-Ile-Tyr-Gln-Gly-Arg-Leu-Trp-Ala-Phe-Cys-Cys, Ile-Leu-Pro-Trp-Lys-Trp-Pro-Trp-Trp-Pro-Trp-Arg-Arg-COOH, Ile-Leu-Pro-Trp-Lys-Trp-Pro-Trp-Trp-Pro-Trp-Arg-Arg-COOH, and Gly-Ile-Gly-Lys-Phe-Leu-His-Ser-Ala-Lys-Lys-Phe-Gly-Lys-Ala-Phe-Val-Gly-Glu-Ile-Met-Asn-Ser, substitution analogs thereof in which one or more amino acid residues have been replaced by a conservative amino acid substitutions to provide equal or better antimicrobial activity, and deletion analogs thereof in which one or more amino acid residues have been deleted to provide equal or better antimicrobial activity.

17. (Currently amended) A medical device of claim 16, wherein each of said one or more antimicrobial peptides has an amino acid sequence selected from the group consisting of Lys-Trp-Lys-Leu-Phe-Lys-Lys-Ile-Gly-Ala-Val-Leu-Lys-Val-Leu-COOH, Lys-Trp-Lys-Leu-Phe-Lys-Lys-Ile-Gly-Ala-Val-Leu-Lys-Val-Leu-NH₂, Ile-Leu-Pro-Trp-Lys-Trp-Pro-Trp-Trp-Pro-Trp-Arg-Arg-COOH, and Ile-Leu-Pro-Trp-Lys-Trp-Pro-Trp-Trp-Pro-Trp-Arg-Arg-COOH ~~are selected from the group consisting of Cecropin A-melittin hybrid and Indolicidin.~~

18. (Original) A medical device of claim 16, wherein the medical device is a contact lens.

19-20. (Cancelled).